

CONTRACTOR FALL

**Naval Facility: NAVAL RESEARCH
LABORATORY, WASHINGTON D. C.**

Failure to Use Debris Chute

NAVFACHQ Abstract 98-1

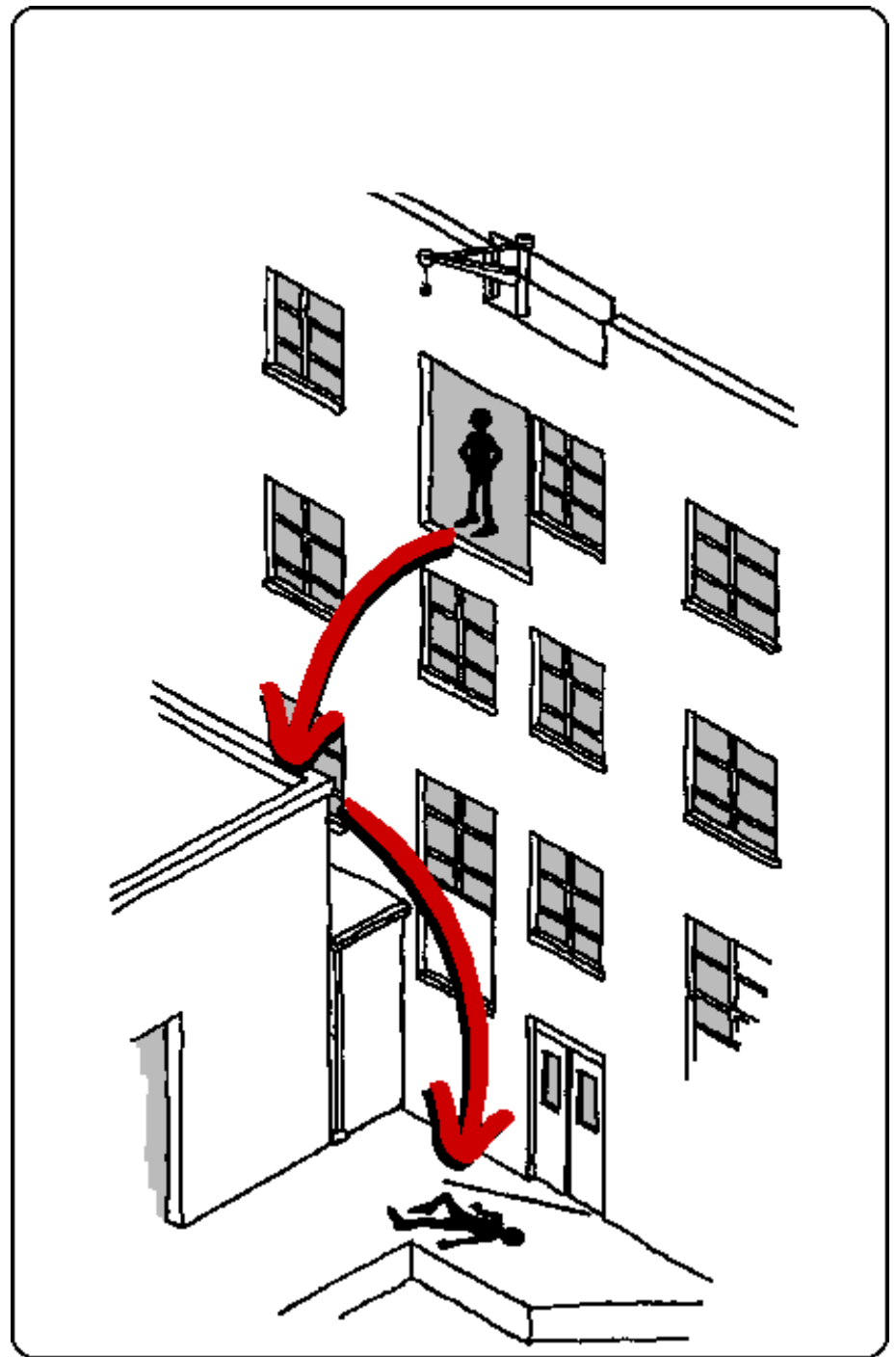
BACKGROUND:

Work: Demolition phase,
end of shift securing of
hand made debris removal
system

Accident Scene:

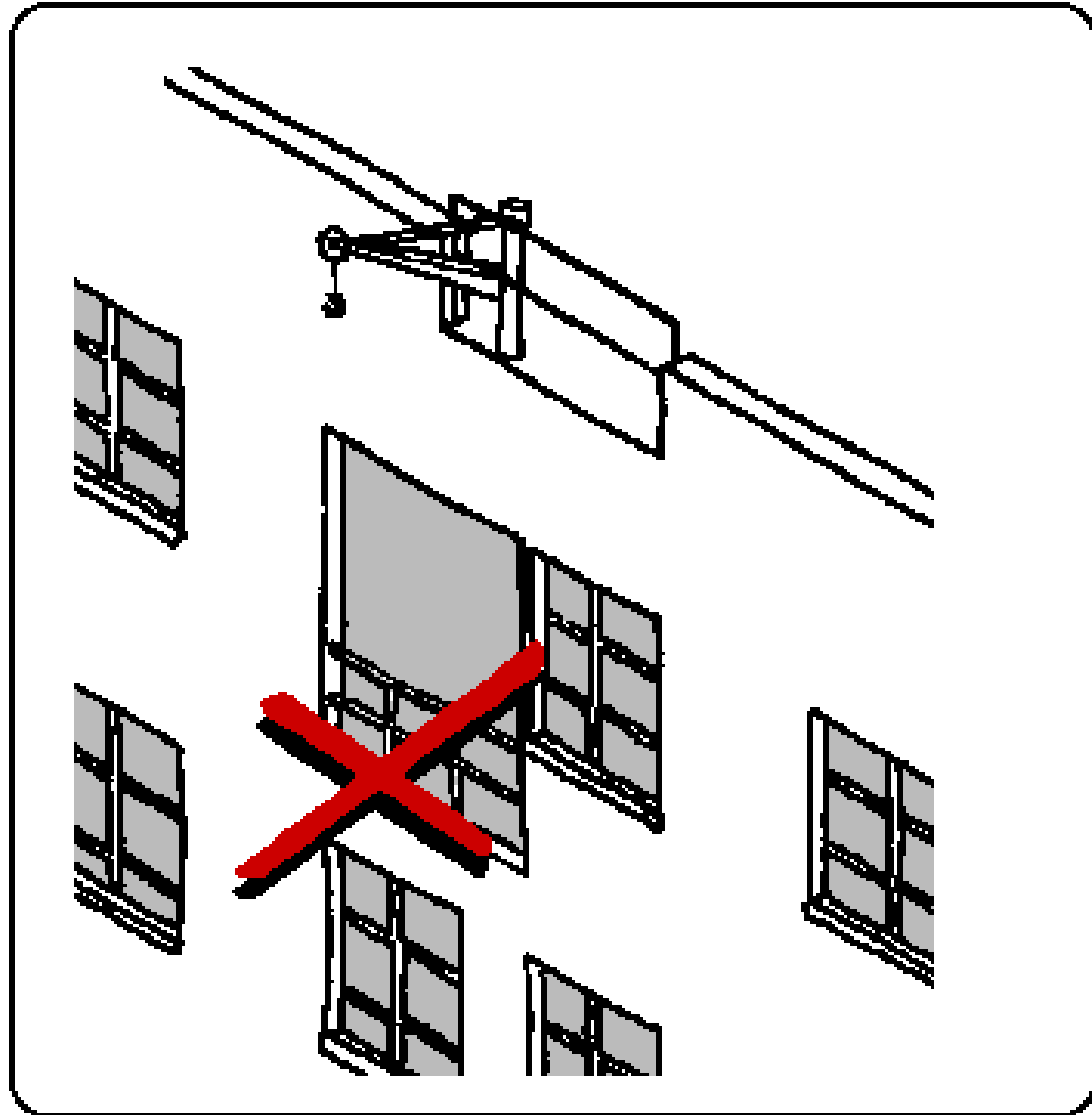
4th floor bldg, fell 30 feet

Electrical sub contractor fell
out of unguarded wall
opening



Sequence of Events

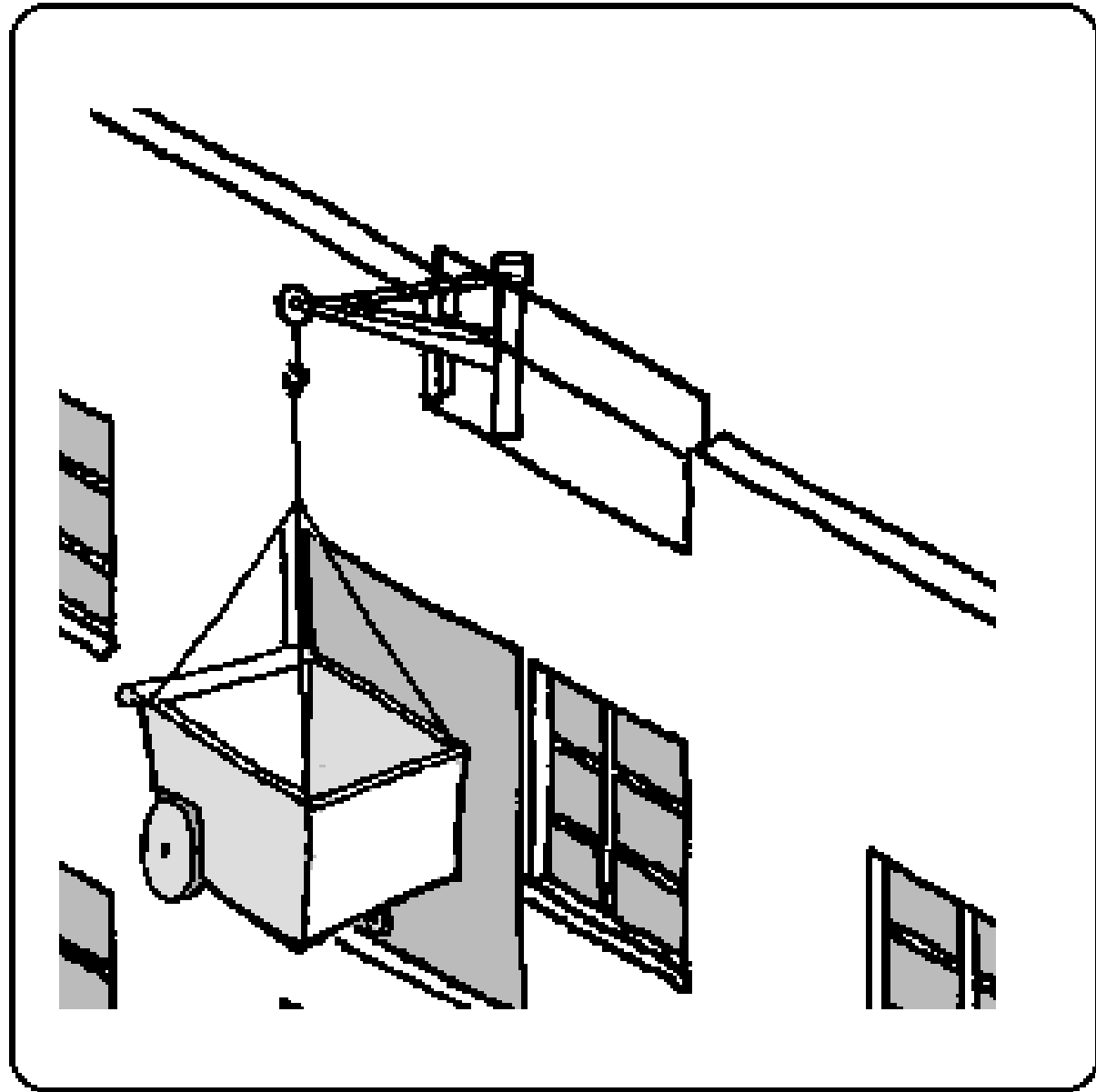
1. Guard rail removed by contractor.



Sequence of Events

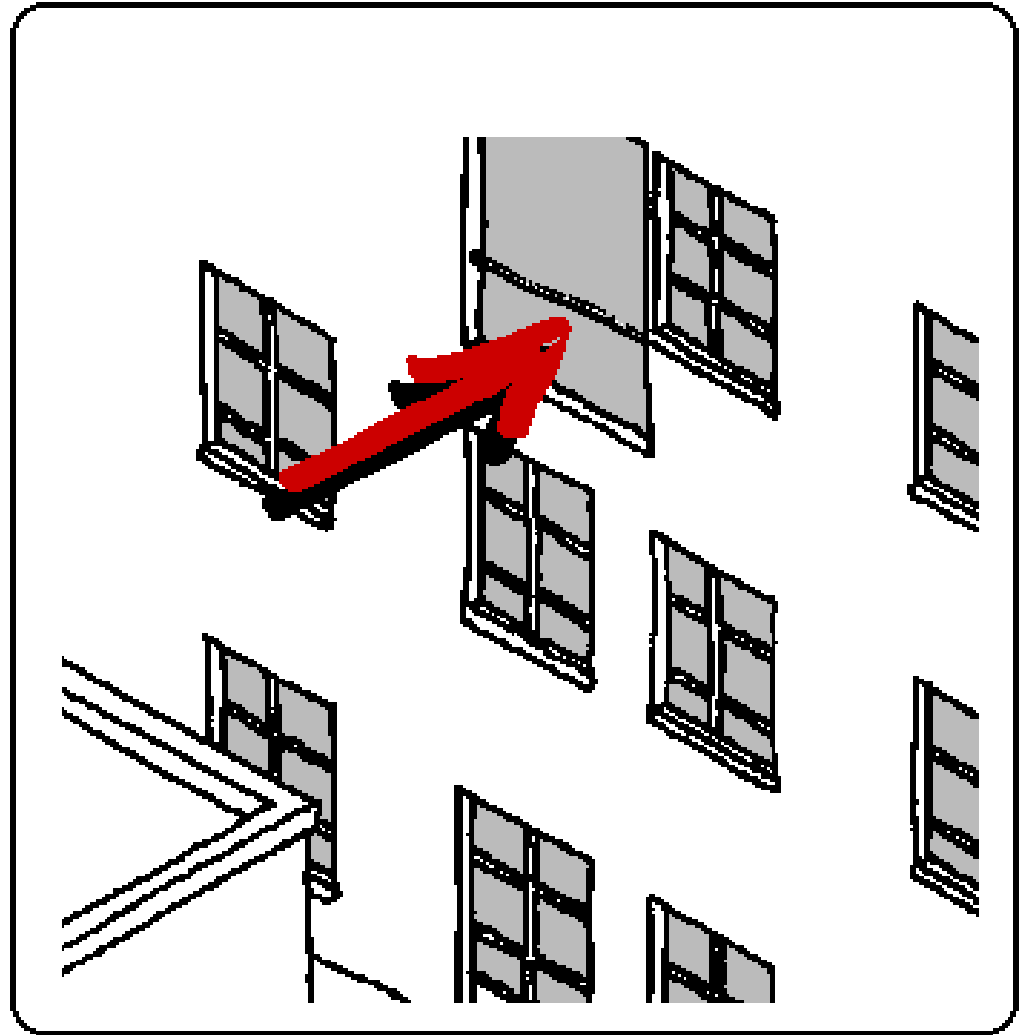
2. Tilt cart used instead of debris chute.

Contractor rigged winch to out-of-service pillar crane with wrong hoist.



Sequence of Events

3. Copper pipe with crimped ends improperly substituted as a “guardrail”

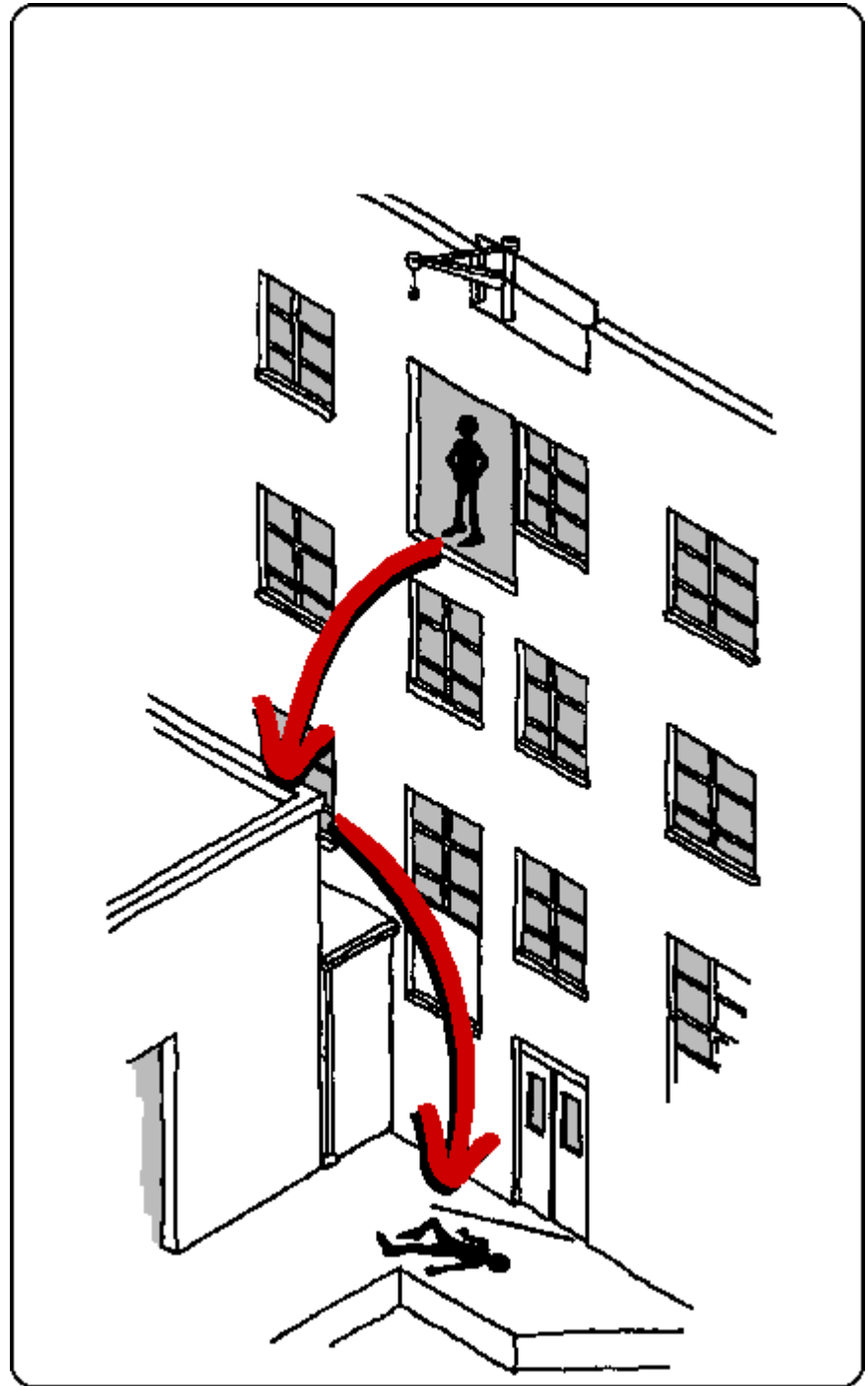


Sequence of Events

4. Worker leaned against copper pipe, which gave way, and he fell through the 4th floor opening to the loading dock below. (sketch shows pipe at bottom with victim)

Worker died from fractured C-1 vertebra.

Elapsed fall time:
about 1.5 sec.



ACCIDENT SUMMARY

ACCIDENT TYPE: Fall from 4th floor double door wall opening.

INJURY: Fatality. C1 cervical spine fracture

TYPE OF WORK: Demolition phase, end of shift securing hand made debris removal.

SAFETY EQUIPMENT: Regular building guard rail system not used.

Fall arrest system (FAS) w/harness was present but not used. FAS improperly attached to unknown anchorage & shock absorber.

DESCRIPTION: Man on roof pulls arm of roof mounted pillar crane 90 degrees closer to building, in order to detach the winch/hoist assembly. Man standing in 4th floor opening lifts the lower unistrut extension also attached to the winch/hoist assembly so the roof man can detach by removing chain link from open hook. 4th floor man falls from doorway, striking adjacent roof in first 11 feet of fall.

CONTRIBUTING CAUSES:

Lack of Activity Hazard Analysis for demolition debris removal process.

Debris removal system “designed” and installed contrary to Contract & Accident Prev Plan.

Failure to recognize, train personnel and control fall hazards.

LESSONS LEARNED:

Use debris chutes IAW Spec & Accident Prevention Plan

Use existing building guardrail system

Use passive fall arrest system whenever fall hazard exists - as secondary system.

Ensure hoisting systems designed by an engineer.

OSHA CITATIONS

4 CITATIONS ISSUED: \$11,120.00* to controlling employer & victim's employer.

--Employer rep. did not ensure that the employee...leaning through the access opening or out over edge of the access opening to receive or guide equipment & material...protected from fall hazards by a personal fall arrest system (1926.501 b 3)

-- Guardrail system was not used when hoisting operations were not taking place. Removable 'pipe' was used as guardrail system.(1926.502 b 10)

--No training program was provided for employee who might be exposed to fall hazards. (1926.503 a. 1)

* The amount of the penalty is not critical, the fact the employer was cited is the concern. For their next incident, the employers may be cited as "Willfull"



Victim's truck...in parking lot after accident.

For Construction Safety Information, contact:

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